	Application No.	Applicant(s)
Notice of Allowability	10/733,866	HILL ET AL.
	Examiner	Art Unit	
	DAVID E. ENGLAND	2443	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *02/11/2011*.

2. ☒ The allowed claim(s) is/are *1, 6 – 15, 17, 22 - 32, 35 - 43 and 46 - 48* .

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None   of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of
       Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application

6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *04/25/2011* .

7. ☒ Examiner's Amendment/Comment

8. ☐ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

/David E. England/
Primary Examiner, Art Unit 2443

<div align="center">**EXAMINER'S AMENDMENT**</div>

1.   An examiner's amendment to the record appears below. Should the changes and/or

additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR

1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the

payment of the issue fee.

        Authorization for this examiner's amendment was given in a telephone interview with

Don C Pua reg. No. 67028 and Russell Jeide Reg. No. 54198 on 04/25/2011.

        The application has been amended as follows:

2.   Claim 32 (Currently Amended)   A ~~tangible~~ <u>non-transitory</u> computer-readable storage

medium having stored thereon computer-executable instructions that, in response to execution by

a computing device, cause the computing device to perform operations comprising:

3.   determining a future time for which a bandwidth capacity of the network is evaluated;

4.   determining a total bandwidth capacity of the network at the future time;

5.   determining a total demand for the network at the future time;

6.   determining a predicted utilization of the network at the future time as a function of the

total demand and the total bandwidth capacity of the network;

7.   determining a maximum acceptable utilization of the network at the future time;

8.   determining, for the future time, a change in total network bandwidth capacity to be

applied to the network in order to increase the total bandwidth capacity of the network, the

change based at least partly on a difference between the predicted utilization of the network and

the maximum acceptable utilization;

9.   determining a lead time for adding one or more products for providing the determined

change in total network bandwidth capacity to the network, the lead time indicating an amount of

time needed to procure the one or more products; and

10.   initiating procurement of the one more products in advance of the future time by at least

the determined lead time.

11.   Claim 35. (Currently amended) The ~~tangible~~ non-transitory computer-readable storage

medium of claim [[34]] 32 wherein the lead time is a function of an installation time for

installing the one or more products and an advance purchase time for obtaining the one or more

products.

12.   Claim 36. (Currently amended) The ~~tangible~~ non-transitory computer-readable storage

medium of claim 32wherein said determining the total bandwidth capacity of the network at the

future time comprises:

13.   determining a present bandwidth capacity of the network; and

14.   identifying a planned change in network bandwidth capacity to be applied the network

between a present time and the future time.

15.   Claim 37. (Currently amended) The ~~tangible~~ non-transitory computer-readable storage

medium of claim 32 wherein said determining, for the future time, the change in network

bandwidth capacity utilizes one or more of the following:

16.   a current utilization (CU) of the network, a growth trend of a utilization of the network,

or a cost measure of a bandwidth capacity to be added to the network.

17.   Claim 38. (Currently amended) The ~~tangible~~ non-transitory computer-readable storage

medium of claim 32 wherein said determining the total demand for the network at the future time

comprises:

18.   determining a present demand of users for the network; and

19.   determining a change in demand of users for the network between a present time and the

future time.

20.   Claim 39. (Currently amended) The ~~tangible~~ non-transitory computer-readable storage

medium of claim 32 wherein determining the predicted utilization of the network at the future

time comprises dividing the total demand for the network by the total bandwidth capacity of the

network at the future time.

21.   Claim 40. (Currently amended) The ~~tangible~~ non-transitory computer-readable storage

medium of claim 32 wherein the acceptable utilization of the network is a function of a response

time of an application operating via the network.

22.   Claim 41. (Currently amended) The tangible computer-readable storage medium of claim

32 wherein the operations further comprises:

23.   planning a budget for applying the determined change in network bandwidth

capacity to the network; and

24.   determining a cost measure of the determined change in network bandwidth

capacity.

25.   Claim 46. (Currently amended) The method of claim 1, further comprising determining

the ~~change~~ changes in total network bandwidth capacity at least partly based on an amount of

time the network is over utilized.

26.   Claim 47. (Currently amended) The method of claim [[45]] 46, wherein the ~~change~~

changes in total network bandwidth capacity is substantially zero if the network is over-utilized

below a first amount of time during an evaluation time period.

27.   Claim 48. (Currently amended) The method of claim [[46]] 47, wherein the first amount

of time is less than a majority of the evaluation time period.

28.   The following is an examiner's statement of reasons for allowance:

29.   the closest prior arts of record, Tunnicliffe et al. 6272110, Datta et al. 6209033, and Vogl

et al. 7403994, do not teach nor suggest in detail, determining a future time for which a

bandwidth capacity of the network is evaluated; determining a total bandwidth capacity of the

network at the future time; determining a total demand for the network at the future time;

determining a predicted utilization of the network at the future time as a function of the total

demand and the total bandwidth capacity of the network; determining a maximum acceptable

utilization of the network at the future time; determining, for the future time, a change in total

network bandwidth capacity to be applied to the network in order to increase the total bandwidth

capacity of the network, the change based at least partly on a difference between the predicted

utilization of the network and the maximum acceptable utilization; determining a lead time for

adding one or more products for providing the determined change in total network bandwidth

capacity to the network, the lead time indicating an amount of time needed to procure the one or

more products; and initiating procurement of the one more products in advance of the future time

by at least the determined lead time, as argued and taught by the Applicant, (see Remarks dated

02/11/2011; Specification as of 12/11/2003, pages 9-21; and Drawings as of 12/11/2003, Figures

1 and 4 of Applicant's enabling portions of the specification and drawings).

30.   The claimed invention teaches monitoring bandwidth capacity of a network and

determining bandwidth capacities for future and lead times. These times are utilized for adding

one or more products for providing a determined change in total network bandwidth capacity,

see Figure 1, elements 108 – 120 and 126.

31.   As stated in an interview conducted 02/09/2011 Vogl did not appear to teach the newly

amended claim language that cleared up the differences about the times and how they are

different from one another. Tunnicliffe and Datta do not teach the claim language that Vogl

taught and that is now amended into the claims.

32.   It is further clear that the Applicant means to claim a non-transitory computer readable storage medium similar to what is found in paragraph 0066 and other hardware that is not a signal.

33.   The dependent claims further limit the independent claims and are considered allowable on the same basis as the independent claim as well as for the further limitations set forth. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

34.   Claims 1, 6 – 15, 17, 22 - 32, 35 - 43 and 46 - 48 are allowed.

        Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

        Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID E. ENGLAND whose telephone number is (571)272-3912. The examiner can normally be reached on Mon-Thur, 7:30-5:30.

        If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tonia Dollinger can be reached on 571-272-4170. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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